

# NEURO TRONIC – Microprocessor Stance and Swing Phase Control



## NEURO TRONIC – The Orthosis Control



### Intelligent Motion Sensors

The motion sensors in the controller register the position and movement of the lower leg and signal to the system joint when it should lock and unlock. The sensor data is processed 400 TIMES PER SECOND by the high-performance microprocessor, which allows the system joint to react extremely quickly to situational changes when walking.

### Lightweight, Flat and Compact

The new controller is divided into two parts via a jointed connection and can thus be mounted anatomically and discreetly in the lower leg shell.

### Various Operating Options

Using the User app on a smartphone (iOS/Android), a smartwatch app or the Bluetooth remote control



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### Safe in Every Situation

If the patient changes from standing to walking, the ULTRA-FAST HIGH-PERFORMANCE MICROPROCESSOR registers the change in real time, using the sensor data, and switches the system joint to walking mode. Sudden stops immediately activate the stance mode. The orthotic system joint secures the knee at any knee flexion angle and thus provides safety in any situation - even on uneven ground and slopes.

### Three Mode Options using a Remote Control, a Smartphone (iOS/Android) or an Apple Watch by Bluetooth:

- Auto – automatic intelligent response between free moving/locked
- Free – permanently free moving
- Lock – permanently locked

### Two Mode Options using the Lever:

- Auto – automatic intelligent response between free moving/locked
- Free – setting for situations in which the joint should be permanently free moving, e.g. when driving or cycling, or as an energy-saving function

### Function Video



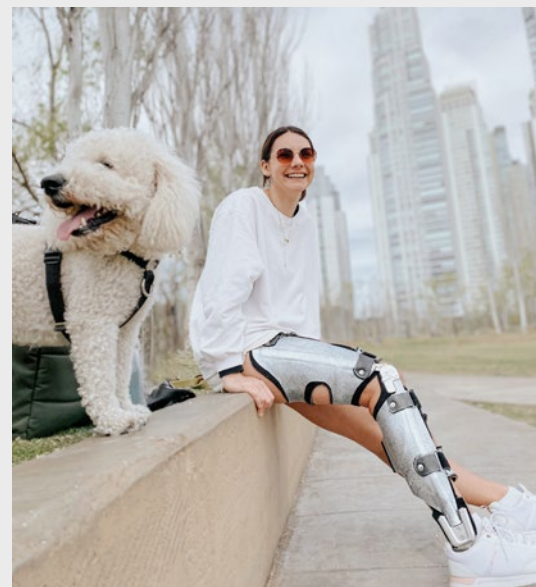
Scan the QR code  
for more information



## Easy and Safe

- Natural gait. Slow or fast, but most importantly safe walking even when alternating between short and long steps.
- Compact and lightweight. The system knee joint can be comfortably worn under the trousers and offers a high level of wearing comfort.
- Easy handling. The **NEURO TRONIC** can be operated with the remote control and, after downloading the User app, with a smartphone (iOS or Android) or Apple Watch.
- Permanently locked. The system joint can be permanently locked in case of increased safety requirements. The **NEURO TRONIC** can also be permanently unlocked for activities (e.g. cycling).
- High performance rechargeable battery. An orthosis with the **NEURO TRONIC** system knee joint can be used all day without any problems.

In Free mode: 40 hours. In Auto mode: 42,000 strides (marathon).  
The use in Lock mode does not require power.



“ I can dance again. ”

Noelia Martinez,  
Argentinian National Champion Dancer.  
ADIDAS Model Ambassador

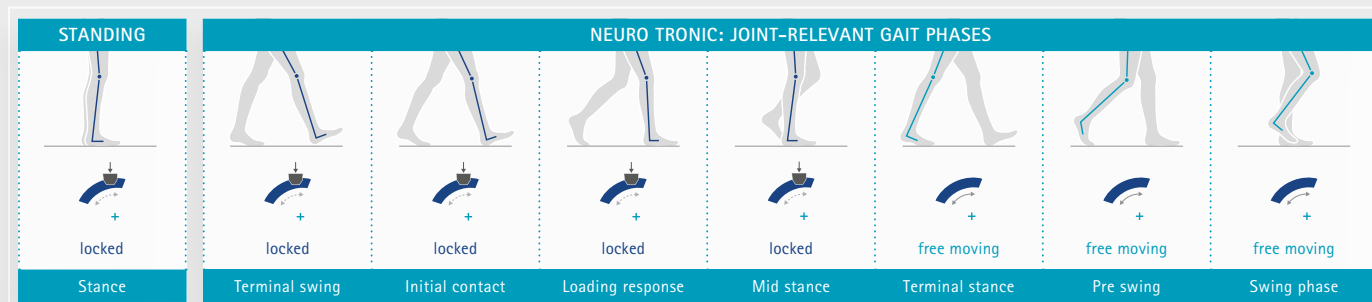
## Microprocessor Swing and Stance Phase Control

In order to adjust the **NEURO TRONIC** to the patient's individual safety needs, the orthotist can set the exact locking time in terminal swing and unlocking time in terminal stance via the **Expert app**.

- In walking mode, the knee is locked in the stance phases of the gait cycle starting at **terminal swing**. The sensor detects the gait phase regardless of the angle between the lower leg and the ground as well as the knee angle.
- The flexion of the knee is prevented in all stance phases **up to mid stance**.
- Consequently, the knee can be extended without resistance during swing phase.
- **At terminal stance**, the knee unlocks so that it can be bent starting at **pre swing** to execute the swing phase.
- The knee flexion is carried out without resistance, thus achieving a physiological knee flexion in **mid swing**.
- Stumbling due to insufficient knee flexion is therefore impossible.



FIOR & GENTZ Expert app



## NEURO TRONIC – Different Joint Sizes for a Perfect Fit







Would you like to produce an orthosis with a **NEURO TRONIC** system knee joint for your patient?

Use the Orthosis Configurator to independently select the necessary system components for an orthosis with the **NEURO TRONIC**.

The Orthosis Configurator determines the appropriate system components for your patient by taking the patient data and the load capacity into account.



**Orthosis  
Configurator**

[www.orthosis-configurator.com](http://www.orthosis-configurator.com)

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